

# Use And Abuse Of The Medical Loss Ratio To Measure Health Plan Performance

*This accounting tool was never intended to measure quality or efficiency.*

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**ABSTRACT:** This paper examines the use and abuse of the medical loss ratio in the contemporary health care system and health policy debate. It begins with a survey of the ways in which the medical loss ratio has been interpreted to be something it is not, such as a measure of quality or efficiency. It then analyzes key organizational features of the emerging health care system that complicate measures of financial performance, including integration between payers and providers, diversification of payers across multiple products and distribution channels, and geographic expansion across metropolitan and state lines. These issues are illustrated using medical loss ratios from a range of nonprofit and for-profit health plans. The paper then sketches a strategy for improving the public's understanding of health plan performance as an alternative to continued reliance on the flawed medical loss ratio. This strategy incorporates data on structure and process, service quality, and financial performance.

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THE MEDICAL LOSS RATIO serves as a Rorschach test for the American health policy debate. In principle, this statistic measures the fraction of total premium revenue that health plans devote to clinical services, as distinct from administration and profit. In practice, however, purchasers, providers, consumers, investors, and regulators interpret the medical loss ratio in quite different and mutually inconsistent ways as measuring what they most like or dislike about managed care. Some view a low medical loss ratio as an indicator of health plan efficiency, solvency, and creditworthiness. Others denounce a low ratio as proof of quality shading, risk skimming, and profit mongering. The debate reflects widespread anxiety over the current turmoil and future trajectory of the health care system as it plunges into a brave new world of integrated medical groups, large hospital systems, and

diversified health insurance plans.

The great irony of the medical loss ratio debate is that public interest in it is peaking at precisely the moment when this obscure statistic is losing whatever meaning it once held. In the traditional world of indemnity insurance, the medical loss ratio provided a reasonable approximation of the division of revenues between the delivery of care, on the one hand, and insurance functions, on the other. In the indemnity context, insurers engaged in marketing, investing, and actuarial activities but limited their engagement with medical care to the processing and payment of claims. Physicians and hospitals incurred administrative expenses in managing their practices and institutions, but they did not engage in significant insurance functions.

In the rapidly emerging context of integrated delivery systems and managed health care, this once clear distinction between func-

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tions has become hopelessly blurred. Insurers now have assumed responsibility for managing the efficiency and quality of the services they cover. Medical groups and hospital systems are assuming insurance risk through capitation payment and are marketing their services directly to purchasers and consumers. Health plans are offering a wide range of managed care products to a broad mix of customers. The rapid geographic expansion of health plans and provider systems spreads core managerial functions and expenses across state lines. Medical loss ratios computed for particular products marketed to particular purchasers in particular states are subject to somewhat arbitrary accounting conventions. As consumers, purchasers, regulators, and investors pressure health plans to ensure that their ratios are neither "too low" nor "too high," this arbitrariness increasingly will be supplemented by strategic accounting manipulations.

This paper begins with a survey of the ways in which the medical loss ratio has been interpreted to be something it is not. It then analyzes the key organizational features of the emerging health care system that complicate any attempt to measure financial performance. Finally, it sketches a strategy for improving the public's understanding of health plan performance as an alternative to continued reliance on the flawed medical loss ratio. This strategy is quite modest, since it abandons the quest for a single measure of financial performance that is both easily interpretable and analytically valid. Yet it is also quite ambitious, since it necessitates an expansion in the data on expenses, organizational structures, and service quality that are being collected by purchasers and consumer advocates. The traditional system of indemnity insurance and fragmented delivery lacked economic accountability and is collapsing under its own weight. The new system of integrated financing and delivery will deliver the effi-

ciency it promises only if it develops meaningful standards of performance to which it can be held accountable.

### THROUGH THE GLASS DARKLY

The components of the medical loss ratio are derived from internal accounting statistics developed by insurance companies to measure what fraction of premium revenues are paid out in claims ("losses"). State insurance departments gradually have required insurers

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to file loss ratios as part of their documentation of solvency and, in regulated contexts, documentation for rate increases. The National Association of Insurance Commissioners (NAIC) has sought to standardize the often inconsistent accounting practices and definition of terms (for example, what counts as an "administrative" expense). The available data on medical loss

ratios, which are collected from state agencies, suffer from the inconsistent nature of the underlying insurer reports, the limits of auditing standards, and the incomplete adoption of NAIC guidelines. Public access is difficult and time-consuming, since the information typically is neither centralized nor provided in electronic format.

Despite the difficulties in access and interpretation, the medical loss ratio has achieved in recent years a remarkable amount of publicity and even notoriety. Some provider and consumer groups have accused health plans with low medical loss ratios of skimping on the quality of medical services. Critics of the health care system have used low medical loss ratios as an index of administrative waste. Investors have used low medical loss ratios in a quite different manner, as an indicator of financial solvency, creditworthiness, and potential profitability.

■ **QUALITY OF CARE.** The medical loss ratio is often referred to in discussions about health care quality, with the implicit if not explicit inference that a low ratio indicates

underprovision of needed services. By extension, a high ratio indicates good quality of care. For example, a consumer-oriented report advocates use of the medical loss ratio as a "reliable measure" of the "level of service" provided by health maintenance organizations (HMOs) and advocates particular attention to the ratios of for-profit plans. "The essence of the problem is this: by rationing care, HMOs achieve lower expense ratios thereby leaving a larger slice of the pie for profits."<sup>1</sup> Physician organizations have assailed low medical loss ratios as indicators of reduction in the quality of care provided to enrollees and sponsored legislation mandating minimum ratios.<sup>2</sup> This sentiment has been echoed by some consumer advocacy organizations.<sup>3</sup>

This is politically the most volatile and analytically the least valid use of the statistic. The medical loss ratio is a ratio of medical expenditures to insurance premiums. High ratios can be achieved either through a large numerator (high medical expenditures) or through a small denominator (low insurance premiums). The medical loss ratio, as a ratio of the two, can be measuring the impact of medical market competition on expenditures or of insurance market competition on premiums. For example, a statistical analysis of medical loss ratios in three states found that administrative loss ratios were higher (and medical loss ratios were lower) in plans that relied extensively on capitation rather than on fee-for-service; this difference was attributable solely to the lower total premiums charged by the capitation-oriented plans (the denominator of the medical loss ratio) rather than to differences in administrative expenses per enrollee.<sup>4</sup> Moreover, neither premiums nor expenditures by themselves indicate quality of care. More direct measures of quality are available, including patient satisfaction surveys, preventive services use, and severity-adjusted clinical outcomes. Although each of these is limited in scope, they at least shed light on quality of care. The medical loss ratio does not.

■ **MEDICAL EXPENDITURES AND ADMINISTRATIVE WASTE.** The nation is engaged in a manhunt for the culprit behind ris-

ing health care costs, with the hope that the miscreant can be eliminated without forcing consumers, payers, and providers to relinquish any of the things they cherish. Consumers want full coverage and unrestricted choice without any premium contributions or cost sharing at the point of service. Providers want high incomes and a "hassle-free" practice environment where they can pursue professional goals without interference. Purchasers want low premiums and no complaints from employees and retirees. Everyone wants the medical loss ratio to measure whether the health plans are delivering on these mutually incompatible demands. For some, a high medical loss ratio means that health plans are spending lots of money on medical care services, which is a good thing.<sup>5</sup> For others, spending lots of money on medical services is a bad thing. In fact, the medical loss ratio does not measure medical expenditures in any direct form, since it is a ratio of spending to revenues.

The search for easy solutions to the health care cost dilemma has heightened attention to "waste." For some, especially health care providers, expenditures on administrative functions such as marketing, utilization management, and financial management constitute wasted social effort that should be minimized if not eliminated. They interpret low medical loss ratios as proof of administrative waste. Others, especially health insurers, interpret the variation in rates of medical and surgical procedures across U.S. geographic areas as indicators of inefficiency within the medical care delivery system. They interpret high medical loss ratios as proof of medical waste. The medical loss ratio sheds no clear light on medical or administrative expenditures and so cannot illuminate the much murkier issue of medical or administrative waste.

■ **FINANCIAL SOLVENCY AND CREDIT-WORTHINESS.** State regulatory agencies have traditionally been responsible for ensuring the fiscal solvency of health insurance companies and, more recently, of managed care plans. It is clearly a matter of public concern and expectation that the premiums paid for health care coverage will be available to

actually pay for services when needed and not lost to unsound investments and bankruptcy. In a quite different context, bankers, pension plans, and individual investors are interested in the financial solidity of the firms to which they offer loans and whose equity offerings they purchase. It is sometimes claimed that the medical loss ratio offers valuable information to these public and private overseers of the health insurance system.

For traditional indemnity insurance, the medical loss ratio provided some indication of whether medical expenses were rising in a way that necessitated commensurate increases in premiums. Some state insurance regulators calculated allowable premium increases based on the ratio of premiums to a target medical loss ratio; if the actual medical loss ratio rose above the target, the regulators would allow insurers to raise premiums. This constituted a form of the cost-plus pricing that has undermined efficiency incentives in industries regulated along "public utility" lines.<sup>6</sup> It is of rapidly diminishing importance as states shift from rate regulation to competition.

The role of the medical loss ratio as a measure of future profitability for investors is more subtle. The equity markets respond to any piece of unexpected information. In some well-publicized instances, unpredicted increases in medical loss ratios have been interpreted as indicators of increased future liabilities (numerator of the medical loss ratio), thereby precipitating an equity sell-off.<sup>7</sup> A high ratio also can be interpreted as an indicator of price competition that reduces plan premiums and revenues (denominator of the medical loss ratio). Needless to say, more direct measures of revenues, market shares, costs, and profits are available to investors. For example, one company developed an extensive analysis of health plan performance based on twenty-three measures and did not deem it important to include the medical loss ratio.<sup>8</sup> Key indicators of performance included number of shares outstanding, earnings per share, value of intangibles and tangible book value, price-to-earnings ratios, price-to-tangible-book values, total income, total debt, and year-to-year

changes in many of these measures. However, another company included the medical loss ratio in its extensive analysis of current and future HMO performance.<sup>9</sup> Low medical loss ratios are interpreted favorably as indicators of future HMO profit potential.<sup>10</sup>

## THE NATURE OF THE BEAST

Any statistical measure will reflect differences among plans in organizational form and economic performance. The difficulties are particularly acute, however, for the medical loss ratio, which directly measures the distribution of revenues among administrative and clinical functions that are organized in different ways in different firms. Of central importance are the relationship between the health plan and its providers (vertical structure), the range of networks and utilization management systems it offers (product diversification), the range of buyers to which it markets its services (channel diversification), and the number of states in which it operates (geographic scope).

■ **VERTICAL STRUCTURE: PLANS AND PROVIDERS.** Differences in the medical loss ratio among health plans reflect different allocations of administrative functions between plans and providers. Indemnity insurers assume no responsibility for the management of physician practices, hospital facilities, or other health care delivery organizations. They tend to exhibit comparatively low administrative expenses and, by extension, high medical loss ratios.

At the other end of the organizational spectrum is the staff-model HMO, where the health plan directly employs its own physicians and, in some cases, owns hospitals. Whether the staff-model HMO reports a high or a low medical loss ratio depends on how it attributes administrative expenses to its health plan, medical group, and hospital divisions. It is possible for vertically integrated health plans to report almost nothing for administrative expenses (and hence report a very high medical loss ratio).

Between indemnity insurance and the staff HMO lies a heterogeneous mix of health plan

types that rely primarily on contractual rather than ownership linkages with providers but that engage in extensive management of utilization and medical expenditures. Some plans, including preferred provider organizations (PPOs) and independent practice associations (IPAs), contract directly with individual physicians and perform utilization management and quality assurance functions in-house. These plans tend to exhibit high administrative expenses and low medical loss ratios on the health plan side. Other plans contract with medical groups and delegate to them the primary responsibility for utilization management and quality assurance. These network HMOs will tend to report an intermediate level of administrative expenditures and medical loss ratios, depending on the extent of delegation.

There are important differences among health plans in their administrative and medical expenditures. It is not clear, however, that lower administrative expenses are socially more desirable than higher expenses, once the causes of the differences are understood. Higher administrative expenditures may reflect a greater investment in management and coordination of care, which reduces clinical expenses. Administrative expenses also reflect the size of the provider network. HMOs with very narrow networks (for example, staff models that only permit enrollee access to employed physicians) will tend to incur lower administrative expenses. The rapid enrollment growth in IPA- and network-model HMOs strongly indicates that many consumers prefer broad networks despite the higher administrative costs they incur.

■ **PRODUCT DIVERSIFICATION: PLAN TYPES.** Differences in medical loss ratios strongly reflect the range of products offered by competing plans. In the not-so-distant past, health plans tended to offer only one product, either indemnity insurance or an HMO. Now many health plans offer a range of distinct plans. Plans differ in the range of products they offer and in the distribution of their total patient enrollment among products. The medical loss ratio for the plan as a

whole will reflect the range of product diversification as well as the distribution of administrative and medical expenditures for particular products. If medical loss ratios are reported for individual products, the allocation of joint administrative expenses, such as marketing and medical management, opens the door to “creative” accounting practices.

The interpretation of medical loss ratio differences among plans is complicated even more seriously by the wide range in benefit packages and consumer copayment levels across health insurance products and the tendency of health plans to offer products such as life and disability insurance, dental plans, and “carved-out” pharmacy benefits. Health plans with richer benefit packages tend to incur high medical expenses and thereby high medical loss ratios, since administrative expenses do not rise proportionately to medical expenses in response to benefit coverage. High consumer cost sharing influences the medical loss ratio by shifting costs from the plan’s books to the consumer (lower premium revenue, the denominator of the medical loss ratio) and by reducing patient-initiated utilization (reduced medical expenditures, the numerator of the medical loss ratio).

■ **CHANNEL DIVERSIFICATION: DISTRIBUTION SYSTEMS.** Health plans differ substantially in the nature of the distribution systems they use and the consumers they target. They may focus on large employer groups, small firms and self-employed individuals, state Medicaid programs, Medicare beneficiaries, public employees and military personnel, or self-insured corporations. The costs of marketing vary substantially among these distribution channels and will be reflected in administrative expense levels and loss ratios. Marketing costs tend to be lower when plans can gain large blocks of enrollees through a single contract, as in the large-firm market. Where one-on-one marketing is central, as in the Medicare, small-firm, and individual markets, selling costs are much higher. These costs may be incurred by the plan directly, through employed sales representatives, or indirectly, through brokers and agents. Selling

costs can be reduced in areas where small firms and/or individuals may obtain coverage through purchasing cooperatives. Most large health plans now sell in all major market segments, but the mix of enrollment across segments varies widely. In California, for example, Blue Cross, Blue Shield, and Foundation are strong in the individual and small-firm markets, PacifiCare dominates the Medicare HMO market, Health Net is very successful in the large-firm market, and Kaiser has a considerable presence in all markets.

The influence of channel diversification extends beyond selling costs to revenue potential. Distribution channels such as Medicare and large firms that bring in high revenues per enrollee will produce high medical loss ratios, since administrative expenses do not rise proportionately with medical expenses. The thin benefits that prevail in the small-firm and individual markets will tend to be associated with low medical loss ratios. The interpretation of medical loss ratios is complicated further for health plans that manage the benefit programs of self-insured corporations. This "administrative-services-only" channel reduces the medical loss ratio if medical expenses are booked by the self-insured firm while the health plan books administrative expenses. Product and channel diversification contaminate measures of costs per capita by facilitating multiple counting of enrollees. The same individual can be counted once for the basic health product, once for the pharmacy product, once for the workers' compensation product, and several times more.

■ **GEOGRAPHIC DIVERSIFICATION.** Many users of the medical loss ratio are interested in the distribution of administrative and medical expenses in particular states and metropolitan areas. Health plans, however, are spreading across state lines and in many cases are approaching national scope. Efforts to compute the medical loss ratio for any one geographic region require the parent company to allocate central administrative expenses to particular regions. This is particularly problematic when some products, such as those for federal employees or large corpo-

rations, are marketed and managed at the national level. The distribution of enrollment among various states and localities will influence the medical loss ratio for particular health plans because of geographic variations in wage and other input costs, physician practice styles, and revenue potential. For example, HMOs that sell to Medicare beneficiaries receive a monthly payment that is set at 95 percent of the average expenditure for Medicare's fee-for-service enrollees in each county, adjusted for demographic characteristics. These expenditure levels vary across counties by more than 200 percent because of the variation in fee-for-service practice styles.<sup>11</sup> HMOs with large enrollment in counties with expensive fee-for-service systems will receive high revenues (denominator of the medical loss ratio) without needing to incur commensurably high administrative costs. However, high Medicare payment levels may influence medical costs (numerator of the medical loss ratio) by encouraging nonprice competition among plans on the basis of ever-richer benefit packages.

## EXAMPLES OF MEDICAL LOSS RATIOS

The problems of interpretation inherent in medical loss ratios are illustrated in Exhibit 1, which reports 1994–1995 data for selected health plans. There is wide variation in medical loss ratios, even among plans with similar tax and organizational structures. Medical loss ratios for the nonprofit Blue Cross and Blue Shield plans range from a low of 58.4 percent in Nevada to a high of 95.1 percent in central New York. Even within one health plan, there are huge differences across states. The Kaiser Foundation Health Plan in California, for example, has a medical loss ratio of 96.8 percent, which is frequently cited by the press as evidence that nonprofit and/or staff-model HMOs return a high percentage of premium revenue to enrollees in medical services.<sup>12</sup> But the Kaiser plan in Georgia has a medical loss ratio of only 76.2 percent, and the other Kaiser state and regional plans report a

**EXHIBIT 1**

**Medical, Administrative, And Profit Ratios From Selected Health Plans, 1994–1995**

Health plan	Tax status	Medical loss ratio	Administrative loss ratio	Profit ratio
<b>Blue Cross and Blue Shield</b>				
Central New York	NP	95.1%	8.3%	– <sup>a</sup>
Colorado	NP	64.0	25.5	– <sup>a</sup>
Georgia	NP	91.3	12.3	– <sup>a</sup>
Nevada	NP	58.4	22.6	– <sup>a</sup>
<b>Kaiser Foundation Health Plan</b>				
California	NP	96.8	2.1	1.1%
Georgia	NP	76.2	14.0	– <sup>a</sup>
North Carolina	NP	98.7	4.2	– <sup>a</sup>
Colorado	NP	82.7	13.3	– <sup>a</sup>
<b>WellPoint Health Networks</b>				
Blue Cross of California	NP	93.5	4.2	2.4
CaliforniaCare	FP	73.0	16.3	10.6
<b>Aetna Health Plans</b>				
California	FP	77.4	9.6	13.0
Florida	FP	90.1	12.9	– <sup>a</sup>
New York	FP	95.3	10.3	– <sup>a</sup>
Tennessee	FP	72.8	14.3	– <sup>a</sup>
Illinois	FP	93.1	12.3	–5.4
<b>CIGNA Healthcare</b>				
California	FP	83.2	13.7	3.1
Illinois/Indiana	FP	78.1	11.1	10.8
Illinois/St. Louis	FP	47.2	37.0	15.8
Massachusetts	FP	98.1	16.8	– <sup>a</sup>
Delaware	FP	97.7	17.0	– <sup>a</sup>
<b>MetraHealth Care Plans</b>				
Chicago	FP	108.4	25.6	–34.0
Illinois	FP	74.3	14.3	11.3
St. Louis	FP	69.0	12.7	18.3
<b>CareAmerica</b>				
Southern California Life Insurance	FP	78.3	19.1	2.6
Life Insurance	FP	110.0	24.1	– <sup>a</sup>
<b>FHP Health Care</b>				
California	FP	83.8	12.3	3.9
Illinois	FP	81.0	13.2	5.8
Colorado	FP	81.7	12.6	– <sup>a</sup>
New Mexico	FP	82.1	17.0	– <sup>a</sup>
Utah	FP	89.9	12.4	– <sup>a</sup>

**SOURCES:** California Medical Association, *Knox-Keene Health Plan Expenditures Summary, FY 1994–95* (San Francisco: CMA, February 1996); Weiss Ratings, *Which Health Insurers Give You the Most for Your Money? Which Give You the Least?* (Palm Beach Gardens, Fla.: Weiss Ratings, July 1996); and Illinois State Medical Society, *Illinois Health Maintenance Organizations* (Chicago: Illinois State Medical Society, November 1996).

**NOTES:** NP is nonprofit. FP is for-profit.

<sup>a</sup> Not available.

range of values.

Similar disparities are apparent among state plans operated by for-profit HMOs. The Aetna medical loss ratios range from a low of 72.8 percent in Tennessee to a high of 95.3 percent in New York. At CIGNA, medical loss ratios range from 47.2 percent in St. Louis to 98.1 percent in Massachusetts. And MetraHealth reports remarkable variation in medical loss ratios for one small region: 74.3 percent for the Illinois plan, 108.4 percent for the Chicago plan, and 69.0 percent for the St. Louis plan.

It is difficult to discern any systematic variation in the medical loss ratio figures across states within particular companies, whether nonprofit or for-profit, staff model or IPA. Also, the distinction between nonprofit and for-profit plans, which always receives considerable publicity in medical loss ratio discussions, is not apparent in these figures. The Blue Cross/Blue Shield and Kaiser numbers, on the one hand, and the Aetna, CIGNA, and MetraHealth numbers, on the other, clearly overlap.

Close analysis of particular numbers reveals even more difficulties of interpretation. WellPoint Health Networks has received the brunt of adverse publicity in California, mostly at the hands of the California Medical Association.<sup>13</sup> In 1994 its for-profit subsidiary, CaliforniaCare Health Plans, reported the lowest medical loss ratio in the state (73.0 percent). However, the WellPoint company in 1994 was wholly owned by a nonprofit firm, Blue Cross of California, which reported a medical loss ratio of 93.5 percent, the second highest in the state (after Kaiser). The juxtaposition of low medical loss ratio with for-profit status and high medical loss ratio with nonprofit status has fed the flames of HMO bashing but is completely without substance. In 1994 WellPoint's accountants included all in-network expenditures by enrollees in the PPO subsidiary, Prudent Buyer, under Cali-

forniaCare Health Plans (along with enrollees in the HMO subsidiary, CaliforniaCare). All out-of-network expenditures were considered indemnity rather than managed care, however, and thus were reported under the Blue Cross of California parent.<sup>14</sup> Not surprisingly, the indemnity medical loss ratio is very high.

Another example of the dubious relevance of tax status for understanding medical loss ratio reports is found in CareAmerica, a for-profit plan that is wholly owned by the nonprofit hospital system UniHealth America. CareAmerica also runs a life and disability insurance company, which is largely an indemnity carrier and reports a medical loss ratio of 110.0 percent, in contrast to its HMO medical loss ratio of 78.3 percent.

The difficulties posed by multiproduct health plans are illustrated in the figures for

FHP Health Care, which operates a combination of staff-, group-, network-, and IPA-model HMOs plus other entities in various western states. The medical loss ratio data published by consumer advocacy groups and physician organizations and shown in Exhibit 1 are obtained from annual reports filed by FHP with state regulatory agencies. The reports for each state, however, mix data from multiple states and products.<sup>15</sup> Exhibit 1 presents the numbers filed with state agencies in five states, including California. The California medical loss ratio, however, is based on revenue and expense data from California, Arizona, Nevada, and Guam (which are part of FHP, Inc., of California), plus data from several (but not all) state-specific subsidiaries. The California medical loss ratio includes the financial data from various non-HMO subsidiaries, including FHP, Inc., Reinsurance Limited (Bermuda); FHP Life Insurance Company of California; Ultralink, Inc. (a third-party administrator company in California); Employees Choice Health Option (a

*“Juxtaposition of low medical loss ratio with for-profit status has fed the flames of HMO bashing but is completely without substance.”*

PPO in Utah); and Providers Protective Insurance Company (a workers' compensation company in Guam). The California medical loss ratio also is based on financial data from Hippodrome Galleries Corporation, an art gallery in California owned by FHP.<sup>16</sup>

## BEYOND THE MEDICAL LOSS RATIO

Much of the interest in and demand for medical loss ratios has come from consumers, purchasers, and regulators seeking measures of health care value, efficiency, and quality. These persons and organizations are pressuring health plans to expand the range and improve the reliability of the data needed for making informed choices. The medical loss ratio stands out among the other data elements in its simplicity and its ostensible link to plan efficiency and medical service quality. It is thus with particular reluctance that any of the current users will relinquish the statistic; there is no single substitute available. Nevertheless, consideration of the determinants of medical loss ratios across plans, products, and states necessitates the conclusion that this number is not what it is interpreted to be.

The most important users of health plan information in coming years will be individual consumers and organized purchasers of health benefit programs, including employers, business alliances, Medicaid programs, and Medicare. Consumers increasingly are paying for health care coverage with their own money and facing health plan choices during open enrollment. Purchasers have the organizational capability to understand the performance of health plans to a degree that individual consumers do not. Consumer and purchaser data requirements can be grouped into measures of plan structure and process, clinical quality, and financial performance. Each of these goes far beyond the medical loss ratio.

■ **STRUCTURES AND PROCESSES.** The single greatest gap in the health care data system is in descriptive information on the structure of the provider networks and the mechanisms for utilization management used by competing health plans. It is often difficult to

obtain a well-organized, up-to-date listing of physicians, medical groups, hospitals, and other providers that are included in the various networks offered by health plans. Providers can be dropped from networks after purchasers and consumers have made plan choices. Even more obscure are the rules imposed by health plans concerning patients' movement within a network, including choice of and switching among primary care physicians; access to specialists; admission to hospitals, nursing homes, and rehabilitation facilities; and referral to home health care. The most obscure of all are the methods used by health plans (and their contracting provider organizations) to monitor and manage the utilization patterns of individual patients and physicians. These include clinical services provided directly by primary care physicians, specialty referrals, procedures by specialists after referral, hospital services, and many more. Needless to say, this information is complex, difficult to codify, difficult to quantify, easily misinterpreted, and subject to rapid obsolescence. Nevertheless, it is what consumers and purchasers really want to know. Comparable measures of plan structure and conduct need to be developed for purposes of initial comparison. These can be supplemented with more detailed information for particularly interested parties. The development of both aggregate and specific descriptors will encourage a salutary increase in cooperation between health plans and providers.

■ **QUALITY OF CARE.** The medical loss ratio never was and never will be an indicator of clinical quality. While the holy grail of severity-adjusted outcomes statistics for all clinical services is yet to be found, important steps have been taken in the quest to develop direct measures of quality.

Consumer surveys yield quantifiable and comparable measures of satisfaction with the services provided by plans, physicians, and hospitals. When supplemented by self-assessed measures of health status and functioning, these surveys yield measures of quality from the perspective of those who matter most.

Surveys of random samples of plan enrollees need to be supplemented with special surveys of those with the greatest experience, including enrollees with chronic diseases and those with hospitalization or other major procedures during the previous year. Satisfaction surveys have been pioneered by large corporate purchasers and are now being adopted by small-employer alliances, Medicaid and Medicare, and health plans. Studies have found that self-assessed measures of changes in health status are strongly correlated with clinical measures of health status and thus provide valid indicators of service quality.

Enormous efforts have been devoted in the past five years to the development of process measures of health plan quality such as rates of child immunization, mammography among older women, and participation in smoking-cessation programs. These are being supplemented by more extensive measures through the efforts of the National Committee for Quality Assurance (NCQA), The Medical Quality Commission (TMQC) of the American Medical Group Association (AMGA), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the Foundation for Accountability (FACCT), and other organizations. Where available, severity-adjusted outcomes for selected procedures, such as coronary artery bypass graft (CABG) surgery, can be added to these process measures. The combination of process and outcomes measures constitutes a historical move from a focus on isolated providers and "bad apples" to provider systems and continuous quality improvement. NCQA accreditation, which is based on satisfactory performance on these measures, is an important determinant of purchasing decisions by large firms and is increasingly used in the individual and Medicare markets. Extension and refinement of these measures will provide the foundation for quality compar-

isons in years to come.

■ **FINANCIAL PERFORMANCE.** The best indicator of current and expected future value in a market economy is the willingness of the consumer to purchase and retain the product. In health care, this translates into measures of growth in enrollment and revenues, adjusted for disenrollments and changes in prices. Plans that are growing are offering something for which purchasers are willing to vote with their dollars and consumers are willing to vote

*"The medical loss ratio is an accounting monstrosity that enthralls the unsophisticated observer and distorts the policy discourse."*

with their feet. Publicly traded health plans and provider organizations are subject to continual market valuations, measured through changes in share prices, price-to-earnings ratios, and numerous indicators of tangible and intangible book values. Bankers, mutual funds, institutional investors, and individual speculators have stronger incentives to demand financial data than do consumers, purchasers, and regulators. A judicious piggy-

backing on Wall Street performance indicators would give a better means of evaluating the solvency and creditworthiness of health plans than would any independent compilation by purchasers and regulators. The medical loss ratio offers limited or no value in this respect. Whereas the public debate focuses on the differing levels of medical loss ratios among health plans, the stock market cares only about unanticipated changes in medical loss ratios for particular plans. By the time anyone in policy circles has heard the news, the equity markets have long ago adjusted to whatever information resides in the medical loss ratio.

Any measure of costs is subject to accounting difficulties, which are compounded as health plans mix provider relationships, product networks, distribution systems, and geographic coverages. One step in the direction of reliable cost information can be achieved through requests for per-member-per-month expenditures for particular services (for ex-

ample, physician, inpatient hospital, outpatient hospital, and pharmacy) for particular products (for example, HMO, POS, and PPO) for particular distribution channels (for example, commercial, and Medicaid/Medicare) in particular states. These measures are subject to many of the distortions discussed earlier, including dependence on benefit package and cost-sharing differences, the extent of self-insurance among purchasers, marketing and distribution systems, and within-state differences in costs and practice patterns. Many large corporate purchasers demand per-member-per-month cost data by product and type of service, but these data are controversial because they are of uneven quality. The Pacific Business Group on Health no longer requests detailed cost data from contracting HMOs, but it continues to demand revenue, profit, and other financial information; it judged that the cost data were inherently unreliable.<sup>17</sup> The NCQA has considered including demands for per-member-per-month costs in the Health Plan Employer Data and Information Set (HEDIS) reporting process but has refrained so far.<sup>18</sup> Nevertheless, an incremental approach to cost reporting on a per-member-per-month basis holds more promise than attempts to fix the medical loss ratio.

## CONCLUSION

The managed care system will not generate the improvements in efficiency and quality that it promises unless better data on health plans and providers are available to consumers, purchasers, and policymakers. Consumers need access to better information on provider networks, benefit packages and cost-sharing requirements, methods of utilization management, and satisfaction scores. Public and private purchasers need economic data on enrollment, revenues, costs, and profits, in addition to data on plan structures, processes, and outcomes, in order to reward efficient organizations with increased market shares. As they move away from direct command and control regulation, policymakers need data on health plan solvency, accessibil-

ity, and quality to fulfill the oversight role that the citizenry continues to expect.

More data are needed, but caution must be exercised lest misinterpretation confuse rather than inform health care choices. In particular, quality should be evaluated using data on quality; costs should be evaluated using data on costs; and profits should be evaluated using data on profits. The medical loss ratio is not a straightforward indicator of either medical or administrative expenditures. It certainly is not a measure of clinical quality or social contribution. The medical loss ratio is an accounting monstrosity, a convolution of data from myriad products, distribution channels, and geographic regions that enralls the unsophisticated observer and distorts the policy discourse. The hard but inescapable conclusion is that informed choice and sophisticated purchasing of health care must rely on a more extensive set of performance measures, no one of which is as comprehensive as the medical loss ratio is purported to be but each of which has some of the analytic validity that the medical loss ratio lacks.

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School of Public Health), Carl Volpe (WellPoint Health Systems), and Larry Casalino (Stanford Coastside Medical Clinic). These persons, and the organizations with which they are affiliated, are not responsible for the views expressed here.

**NOTES**

1. Weiss Ratings, *Which Health Insurers Give You the Most for Your Money? Which Give You the Least?* (Palm Beach Gardens, Fla.: Weiss Ratings, July 1996).
2. E. Sanders, "Bills Spark Medical Battle," *Los Angeles Daily News*, 18 March 1994, 1; and T.E. Poling, "HMOs Jockey for Success in Alamo City Market; Prudential Leads in Spending on Services," *San Antonio Business Journal*, 6 October 1995, 1.
3. American Political Network Health Line, "HMOs: Are Medical Loss Ratios an Indicator of Quality?" Healthline Internet Service, 13 October 1995.
4. N.M. Kane, "Financial Performance of IPA/Network HMOs in Three States" (Final report to the Commonwealth Fund, New York, New York, June 1995).
5. In releasing data on medical loss ratios, the California Medical Association announced that the cost of medical care is not the source of increased health insurance premiums, but rather that administration and profits are to blame. A. Barnum, "HMO Industry under Fire," *San Francisco Chronicle*, 3 April 1994, D1.
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7. Associated Press, "Oxford Report Earnings Up, but Stocks Fall," 7 May 1996.
8. Sherlock Company, *Pulse: Market, Financial, and Operating Statistics for HMOs* (Gwynedd, Pa.: Sherlock Company, June 1996).
9. T.E. Hodapp and M. Samols, *HMOs 1995: The Right Place, the Right Time, the Right Idea* (San Francisco: Robertson Stevens and Company, 1 September 1994).
10. Health plan medical loss ratios are also cited by investment analysts who follow the stock prices of physician practice management (PPM) firms, which contract with HMOs to provide physician services from the medical groups and independent practice associations owned and/or managed by the PPMs. These analysts interpret high HMO medical loss ratios as a favorable indicator for PPM profitability, since HMOs under market pressure to lower medical loss ratios are increasingly contracting with PPMs. For example, see UBS Securities LLC, "FPA Medical Management Inc.: Buy," *UBS Securities Equity Research* (New York: UBS Securities, LLC, 25 July 1996).
11. J. Wennberg and M. Cooper, *The Dartmouth Atlas of Health Care in the United States* (Chicago: American Hospital Publishing, 1996).
12. This is the combined figure for the northern and southern California Kaiser regions.
13. For a recent example, see P. Sinton, "How Much HMOs Spent on Patients," *San Francisco Chronicle*, 22 February 1997, D1.
14. The following year the value of the assets owned by the nonprofit organization was transferred to two charitable foundations. Blue Cross of California then converted into a for-profit company. It is now the California subsidiary of WellPoint Health Networks. In summary, Blue Cross of California was the nonprofit parent of the for-profit WellPoint Health Networks, which controlled CaliforniaCare Health Plans, which marketed the Prudent Buyer PPO and CaliforniaCare HMO; now WellPoint is the for-profit parent of Blue Cross of California, a for-profit subsidiary, which markets a range of HMOs and PPOs in California using such names as Blue Cross of California, Prudent Buyer, and CaliforniaCare, with non-California plans formed under the for-profit subsidiary UniCare, which formerly was the nonprofit workers' compensation subsidiary in California. Any questions?
15. Richard A. Caldwell, director, Medical Informatics, FHP Health Care, personal communication, December 1996.
16. For the relationship between art and medicine at FHP, see R. Gumbiner, *FHP: The Evolution of a Managed Care Health Maintenance Organization, 1955-1992* (Berkeley, Calif.: University of California Press, 1995).
17. Patricia E. Powers, executive director, Pacific Business Group on Health, personal communication, December 1996.
18. Pamela Krol, health plan manager, Human Resources, Southern California Edison, and chair, HEDIS Users Group Finance Panel, National Committee for Quality Assurance, personal communication, December 1996.